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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,299

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Shigenobu Yoshida

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NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER

FREEMAN, JOHN D

ART UNIT

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1794

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,299	<b>Applicant(s)</b> YOSHIDA ET AL.	
	<b>Examiner</b> John Freeman	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,9 and 12-28 is/are pending in the application.
- 4a) Of the above claim(s) 16-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,9,12-15 and 25-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Election/Restrictions***

1. Newly submitted claims 16-24 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 16-24 are drawn to a process of making a gas-barrier laminate, however, the originally presented claims are drawn to a product, i.e. the gas-barrier laminate. The gas barrier-laminate can be made by another process: e.g., the laminate could be made without hydrothermal treatment, or the heat treatment can be applied after the polyester-based resin layer is formed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 16-24 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

2. Claims 1-2, 4-5, 7, and 12-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (US 5,856,017) in view of Kajimaru et al. (US 2002/0061959).

3. Regarding claims 1 and 2:

4. Matsuda discloses a film having excellent gas barrier and retorting properties (col 1 ln 11-15). The gas barrier film comprises a plastic film of polyester (col 3 ln 18-29). Thereon Matsuda deposits an inorganic thin film (col 3 ln 38-53) having a thickness of 50-8000 Angstroms, more preferably 70-5000 Angstroms, and most preferably 100-3000 Angstroms (col 6 ln 51-54). Matsuda teaches further organic layers can be laminated onto the thin film (col 8 ln 10-12).

5. Matsuda is silent with regard to a polyester having the presently disclosed glass transition temperature, molecular weight, and hydroxyl value used on top of the inorganic thin film.

6. Kajimaru discloses a polyester resin having high waterproofness, and useful as a coating [0001-4]. The polyester resin has a hydroxyl value of less than 30mg KOH/g [0035] and a weight average molecular weight of 9,000 or more [0009]. Kajimaru discloses the polyester resin has glass transition

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temperatures in the range of 40-100°C, thereby overlapping with Applicant's range [0036]. Example embodiments of the resin have glass transition temperatures within the range claimed by Applicant (p10, Table 1). As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The examiner notes Kajimaru's polyester resins comprise terephthalic acid, isophthalic acid, ethylene glycol, and neopentyl glycol [0122], just as Applicant discloses in Example 1 (p31 of the present specification).

7. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Kajimaru's polyester resin with the gas-barrier taught by Matsuda to improve the waterproof qualities of the barrier.

8. Matsuda's examples show oxygen permeability properties as presently claimed (see Tables 1+). Although Matsuda is silent with regard to the water permeability of the laminate, the examiner takes the position the laminate of Matsuda in view of Kajimaru intrinsically meets said permeability given the laminate is the same as presently claimed.

9. Regarding claims 4-5:

10. Kajimaru discloses isocyanate curing compounds for use in the polyester resin to improve processing, waterproofness, and solvent resistance [0078]. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use an isocyanate curing compound in the polyester to improve processing, and waterproofness, and also keep the hydroxyl value of the isocyanate approximately the same as the value of the polyester to ensure the waterproof property of the layer.

11. Regarding claim 7:

12. The inorganic material is applied via either physical or chemical vapor depositions (col 6 ln 67+). Oxides of aluminum and silicon can be used (col 3 ln 49).

13. Regarding claims 13 and 15:

14. Since the laminate created by the combination of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claim, the examiner takes the position that the laminate would intrinsically possess the properties as described in the present claims 13 and 15.

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15. Regarding claim 28:

16. Matsuda teaches an anchor coat can be used (col 6 ln 61).

17. Regarding claim 12:

18. The present claim is written in a product-by-process format. Given the final product of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claims, the examiner takes the position the final product would be indistinguishable from the product presently claimed.

19. Regarding claim 14:

20. Since the laminate created by the combination of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claim, the examiner takes the position that the laminate would intrinsically possess the properties as described in the present claim 14.

21. Regarding claims 25-27:

22. The present claims are written in a product-by-process format. Since the laminate created by the combination of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claim, the examiner takes the position that the laminate would intrinsically possess the properties as described in the present claims 25-27.

23. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (US 5,856,017) in view of Kajimaru et al. (US 2002/0061959) as applied to claims 1-2, 4-5, 7, and 12-28 above, and further in view of Hall et al. (US 2002/0009564).

24. Matsuda in view of Kajimaru is previously described.

25. Both references are silent with regard to a fatty acid, fatty ester, or fatty amide being added to the polyester resin layer.

26. Fatty acid amides are well-known slip additives to polyester, as evidenced by Hall et al. [0002].

27. At the time of the invention, it would have been obvious to one of ordinary skill in the art to add fatty acid amides to the polyester resin layer to improve its slip and, therefore, handling properties. Given that the range claimed by Applicant is so broad, one of ordinary skill would have naturally arrived at values within the range during routine optimization of the amount used.

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28. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (US 5,856,017) in view of Kajimaru et al. (US 2002/0061959) as applied to claims 1-2, 4-5, 7, and 12-28 above, and further in view of Murai et al. (US 5,853,862).

29. Matsuda in view of Kajimaru is previously described.

30. Both references are silent with regard to an anchor coat as presently claimed.

31. Anchor coats containing polyester were known at the time of the invention. For example, Murai discloses an anchor coat used to secure an inorganic film to a base film, wherein the anchor coat comprises a polyester (col 3 ln 32-54). The anchor coat provides improved adhesion and gas barrier properties, even after retort treatment (col 3 ln 22-31).

32. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the polyester-containing anchor coating taught by Murai in the gas barrier taught by Matsuda and Kajimaru to improve adhesion and gas barrier properties.

### ***Claim Rejections - 35 USC § 112***

33. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

34. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

35. Claim 12 recites "forming the inorganic film (B) on the plastic substrate (A) or on the anchor coat layer formed on the plastic substrate (A)." Present claim 8 recites the presence of the anchor coat between layers (A) and (B). Therefore, the "forming the inorganic film (B) on the plastic substrate (A)" of claim 12 confuses the ordering of layers and makes it unclear what is required by the claim.

### ***Response to Arguments***

36. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

37. Regarding the rejection of claim 12 under 35 USC 112, Applicant requests clarification of the rejection. The examiner finds the language of claim 12 confusing. Claim 8 recites a laminate consisting of (A)/anchor coat/(B)/(C), whereas claim 12 states (B) can be formed on either (A) or the anchor coat. Since claim 8 states the anchor coat layer is between (A) and (B), claim 12 cannot recite (B) being formed on (A) without conflicting with claim 8. If Applicant deletes "on the plastic substrate (A) or" from line 2 of claim 12, the rejection would be overcome.

### ***Conclusion***

38. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Freeman  
Examiner  
Art Unit 1794

/John Freeman/  
Examiner, Art Unit 1794

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794